fueled, natural gas-fueled, liquefied petroleum gas-fueled and methanol-fueled heavy-duty vehicles.

(b) Three topics are addressed in this subpart. Sections 86.1206 through 86.1215 set forth specifications and equipment requirements; §§ 86.1216 through 86.1226 discuss calibration methods and frequency; test procedures and data requirements are listed in §§ 86.1227 through 86.1246.

[54 FR 14562, Apr. 11, 1989, as amended at 58 FR 16047, Mar. 24, 1993; 59 FR 48521, Sept. 21, 1994]

§ 86.1206–90 Equipment required; overview.

This subpart specifies procedures for testing of gasoline-fueled and methanol-fueled heavy-duty vehicles. Equipment required and specifications are as follows:

(a) *Evaporative emissions tests.* § 86.1207 specifies the necessary equipment.

(b) *Fuel, analytical gas, and driving schedule specifications.* Fuel specifications for emission testing and for service accumulation are specified in § 86.1213. Analytical gases are specified in § 86.1214. Both vehicle preconditioning for the diurnal loss test and vehicle operation prior to the hot soak loss test include operation on a chassis dynamometer. The driving cycle (EPA heavy-duty vehicle urban dynamometer driving schedule) is specified in § 86.1215.

[54 FR 14562, Apr. 11, 1989]

§ 86.1206–96 Equipment required; overview.

This subpart specifies procedures for testing of gasoline-fueled, natural gas-fueled, liquefied petroleum gas-fueled and methanol-fueled heavy-duty vehicles. Equipment required and specifications are as follows:

(a) *Evaporative emission tests.* Section 86.1207 specifies the necessary equipment.

(b) *Fuel, analytical gas, and driving schedule specifications.* Fuel specifications for emission testing and for service accumulation are specified in § 86.1213. Analytical gases are specified in § 86.1214. Evaporative testing requires vehicle operation on a chassis dynamometer. The driving cycle is specified in § 86.1215.

[58 FR 16047, Mar. 24, 1993, as amended at 59 FR 48521, Sept. 21, 1994; 65 FR 59957, Oct. 6, 2000]

§ 86.1207–90 Sampling and analytical system; evaporative emissions.

The following is a description of the components which will be used in evaporative emissions sampling systems for testing under this subpart.

(a) *Evaporative emission measurement enclosure.* The enclosure shall be readily sealable, rectangular in shape, with space for personnel access to all sides of the vehicle. When sealed, the enclosure shall be gas tight in accordance with § 86.1217. Interior surfaces must be impermeable and non-reactive to hydrocarbons and to methanol (if used for methanol-fueled vehicles). One surface should be of flexible, impermeable and non-reactive material to allow for minor volume changes, resulting from temperature changes. Wall design should promote maximum dissipation of heat, and if artificial cooling is used, interior surface temperatures shall not be less than 68 °F (20 °C).

(b) *Evaporative emission hydrocarbon and methanol analyzers.* (1) For gasoline and methanol-fueled vehicles a hydrocarbon analyzer utilizing the hydrogen flame ionization principle (FID) shall be used to monitor the atmosphere within the enclosure (a heated FID (HFID)(235°±15 °F (113±8 °C)) is recommended for methanol-fueled vehicles). Instrument bypass flow may be returned to the enclosure. The FID shall have a response time to 90 percent of final reading of less than 1.5 seconds, and be capable of meeting performance requirements expressed as a function of Cstd: where Cstd is the specific enclosure hydrocarbon level, in ppm, corresponding to the evaporative emission standard:

(i) Stability of the analyzer shall be better than 0.01 Cstd ppm at zero and span over a 15-minute period on all ranges used.

(ii) Repeatability of the analyzer, expressed as one standard deviation, shall be better than 0.005 Cstd ppm on all ranges used.